COVID-19: Kerala Experience

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ABSTRACT
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Globally different successful health models had been in the headlines which could contain COVID 19 pandemic in a better way. Mindful debate of various effective strategies adopted by different countries are in the limelight. Policy makers are keenly observing successful interventions to tailor them into their respective nation. Pros and cons of lockdown, magic and myth of herd immunity, grey areas on regard to epidemiological parameters of COVID 19 are some of the hot topics on webinars, apart from controversial theories discussed in social media. The objective of this article is to portrait effort of a small southern state in India occupied by 3 crore population, who have successfully restricted their death to only four.

Keywords: Covid 19, Kerala

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INTRODUCTION

Kerala southern state of India known as Gods own country had been in the global headlines for its tremendous efforts to contain COVID-19. As of 11 May 2020, there were 512 cases and 3 deaths.[1] The state has successful past history of handling Nipah outbreak; a disease which has no treatment or vaccine effectively. The state of Kerala two years ago could restrict number of cases of Nipah to 23 and health system of the state was honoured at international forums. These competent efforts lead in strengthening infection control measures in hospitals across the state.[2]

On 30 Jan 2020, Kerala detected its first case of Covid 19 which was India's first case. The first patient reported was a medical student who had returned from Wuhan, Hubei province of China where the virus broke out. The strategic management of the state followed a rigid protocol of 28-day quarantine to contain the spread of the infection.[3]

The state has unique decentralised system with major planning and funding at grass root level operationalized through Local self-government departments (LSGD) ,Kudumbasree workers (gender empowered units) and Accredited Social Health Activists(ASHA) per thousand population. The state had withstood two test series of flood which was havoc. The disaster paved path in capacity building of volunteers and gave birth to national heroes - the fisherman cohort, acknowledged for prompt rapid response. For COVID-19 containment, time tested strategy of case isolation along with supportive treatment, contact tracing glued with active community surveillance controlled the situation. Thousands of state employed healthworkers with inter-sectorial coordination from other departments, prepared spot maps and flowcharts of cases to find their contacts. The migrant workers were provided food and necessary mental health support. The state was appreciated at starting walk in Kiosks for taking samples which was adopted from South Korea. Break the chain campaign focussing on hand-washing, cough etiquette, physical distancing, wide range of use of masks had helped for behavioural change communication among masses.

The policy of the state is "hope for the best but planned for the worst," and alarmed pandemic is not yet over. Observers appreciated states fast-track response and recognized expertise in managing emergencies.[4] As the state has disproportionately high number of foreign arrivals and huge number of citizens working abroad across the globe, situation is challenging. One million foreign tourists visit yearly, as state is popular for tranquil backwaters and health retreats. Kerala is renowned globally as one of the cheapest tourist destination in the world. One-sixth of its 33 million citizens are expatriates, and hundreds of its students study in China. Airports were prepared for screening and focused on countries were case dominated initially. There were scenario in which more than a dozen foreign nationals were removed from a flight before takeoff as they were not able to complete their isolation period. Temporary quarantine shelters were established to accommodate tourists and other non residents of the state.

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Foreigner couple from Italy didn't follow the protocol of reporting to the health department. The couple attended several social gatherings and travelled widely enhancing contact list of 900 people which disturbed the equilibrium of the health system.[5]

KERALA MAGIC

The state is famous for its model of administration and other states in the country take expert opinion for effective decision making. But replicating strategies of the state elsewhere in India would be challenging. The different governments held in power over the years since the 1950s, has invested heavily in public education and universal health care. Kerala has the highest literacy rate and benefits from the best-performing public health system in the country. It tops India's rankings on neonatal mortality, birth immunizations and the availability of specialists at primary-care facilities. The state was keen at announcing economic package worth $2.6 billion to fight the pandemic and declare complete lockdown even before the central government decision. It effectively provided service to lay people through public distribution system and Anganwadi. Kerala could build liason with service providers to increase network capacity for Internet at homes and pension of two months were given in advance.[5]

Testing

Debate of different modalities of testing and urge for increase number of testing was rampant. The professional body of doctors-Indian Medical Association(IMA) took lead role in emphasising importance of massive testing and protection of health care workers. More queries were raised in the community around the sensitivity,specificity,duration of report,availabilty and cost of the different available tests.WHO recommends molecular (eg PCR) testing of the respiratory tract samples for confirmation of COVID 19 cases.There is another rapid diagnostic test on host antibody detection.Antibodies are produced only in the second week after onset of symptoms.This means antibody will be detected in the recovery phase. And it can cross react with other pathogens including other human corona viruses and give false positive results. Antibody tests are critical to support the development of vaccines,understanding of the extent of infection among people who are not identified through active case finding,to know the attack rate in the population ,study infection fatality rate.It also help physicians to test people who are negative by PCR test but have strong epidemiological link.Hence WHO do not recommend antibody test for patient care but it will be useful for disease surveillance and research.[6]

The incubation period of COVID 19 disease topped the headlines as people were found positive in the state at day 35 and finally settled down, as experts concluded with evidence that it was mere late viral shedding of fragments. Another hot discussion in the social media followed on the infective period of virus, communicable period and origin of virus; apprehension whether it is artificial.Juliet et al reported shedding of virus seems to be greatest during the early phase of disease.But still need more research studies in this area.The phylogenic and genomic analysis have revealed SARS 2 virus is similar to bat virus.[7,8,9]

Following evidence from different countries, the strategy of India was aggressive testing,despite knowing limitations of being a populous country. In the first week of April, Kerala had conducted more than 15,000 tests in comparison to Andhra Pradesh, a more populous state with a similar number of cases,which carried out nearly 8,000 tests, while Tamil Nadu, with more than double the number of cases, had done more than 12,700 tests. The state took the lead in deploying rapid testing kits, which health officials used in hot spots in different cohorts of health personnels,high risk individuals to check community spread.The test kits failed at quality checks by the ICMR which was imported from China.The same issue was again questioned by the Delhi high court and placed remarks on overpricing for the kits. Kerala is awaiting for the approval of kits which was developed by Sree Chitra Tirunal Institute for Medical Sciences and Technology. Once the kit is being approved ,the state had planned to have 75 lakh kits in place for massive random testing drive.[10]

FUTURE STRATEGIES

Around the globe debate in the current scenario is about the counterpoise between further disease spread after lockdown and economy revival. The nutshell of countries strategy to move out of the lockdown is increasing number of tests, contact tracing, work permit based on immune status, newer therapeutics and development of effective vaccine programs. And here is the relevance of the question what the state of Kerala can contribute more to its citizen.

As its proven that case fatality rate is more among cohorts of high risk,exclusively comorbids.More systematic and sustainable strategies need to be advocated in a state like Kerala which is known as capital for Non Communicable diseases.According to scientists from Achutha menon Research Centre, the state has remarkable prevalence of hypertension of 30% and diabetes of 20 % of its both rural and urban people.[11] High risk isolation is one of the technique that can be done to keep high risk people stay inside the house safely and permitting healthy people to go for work. Special care to be given to old age and other high risk group by the Local Self government bodies if they do not have support system.

Mental well being and lack of psychosocial support

is one of the neglected domain in this era. Special emphasis programs should be ensured by governments and International United nation bodies. Fear mongering should not be allowed at any instance. Fake messages and creating purposeful havocs in the social media should lead to serious legal offence and proceedings.Life skill management trainings utilizing Nehru Yuva Kendra Clubs,Kudumbasree units to coordinate constructive activities and support system should be in place.The state government had issued toll free number for persons in need for psychosocial support is appreciable. More research into the needs of mental health domain need to be streamlined. Gender, children and adolescent separate psychosocial needs to be identified and appropriate solution should be provided.

Challenge of monsoon season around the year is an utmost challenge. Diseases like dengue and hepatitis is already being reported. H1N1,Leptospirosis and vector borne diseases like chikungunea, malaria are expected and would add extra burden in the current scenario. The state is anticipating flood every year. "Jaagratha" campaign started last year by the health department prevented lot of morbidity and mortality. Planning board member Dr B. Ekbal had said Kerala is gearing upto face monsoon challenge while continuing to flatten the COVID 19 curve. He told the state will adopt a two pronged strategy to contain monsoon diseases without losing focus on COVID 19. He added Kerala will be lifting lockdown restrictions in phases. Another challenge is of having porous borders with other states and returning of expatriates.[12]

Special strategies should be incorporated for economic revival. As health cannot standalone leaving its social determinants, targeted interventions are the need of the hour. As global recession exists, Governments need to ensure effective, well-resourced public health measures to prevent infection and implement well-targeted policies. Along side prominent support should be given to health care systems and workers. Measures to protect the incomes of vulnerable social groups and businesses during the virus outbreak should be adopted. Supportive macroeconomic policies can help to restore confidence. If downside risks materialise, and growth appears set to be much weaker for an extended period, co-ordinated multilateral actions to ensure effective health policies, containment and mitigation measures, support low-income economies, and jointly raise fiscal spending would be the solution ahead.[13]

CONCLUSION

The government had faced COVID 19 by raising flagship programmes like "Break the chain Campaign" to increase awareness among masses which denotes to wash hands frequently, use handkerchief, follow cough etiquettes,

stressing physical distancing and special emphasis on use of masks. Success stories from other countries had motivated to common man to wear masks. Recently the state has come with an order to charge fine for those who do no t wear mask when they are outside home. Kerala had begun Break the chain 2.0 campain with the hash tag "Don't spit;or you will fail". The new campaign targets on preventing throwing away of used masks openly,restricting spitting in public,encouraging drinking of enough water and eating good food. With all these prevailing strategies lets hope we could win the war against COVID 19.

END NOTE

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